

A New Species of the Spider Genus *Argyrodes* (Araneae: Theridiidae) from Japan Previously Misidentified with *A. fissifrons*

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千田高史¹⁾・谷川明男²⁾：これまで *A. fissifrons* に誤同定されていた
日本産イソウロウグモ属（クモ目：ヒメグモ科）の1新種

Abstract Bösenberg and Strand (1906) recorded *Argyrodes fissifrons* O. Pickard-Cambridge, 1869 from Japan. Their identification is proved to be wrong by the examination on the type specimens. The spider is described as a new species under the name *Argyrodes kumadai* sp. nov. On the other hand, *A. menlunensis* Zhu et Song, 1991 is newly synonymized with *A. fissifrons*.

Bösenberg and Strand (1906) recorded *Argyrodes fissifrons* O. Pickard-Cambridge, 1869 from Japan. The spider is very common in Japan except northern part of Honshu Island and Hokkaido Island. The spider is often found in the web of *Agelena limbata* Thorell, 1879 and *Cyrtophora moluccensis* (Doleschall, 1857). Mr. Ken-ichi Kumada (personal communication) found that the features of the female epigynum and the internal genitalia of Japanese specimens which had been regarded as *A. fissifrons* did not agree with those described by Chrysanthus (1975) who collected specimens from Lennel Island. The objective of the present study is to clarify whether or not the Japanese spider regarded as *A. fissifrons* is really identical with *A. fissifrons*.

Chrysanthus (1963) reported *A. fissifrons* from New Guinea Island based on the male specimen. He confirmed his identification by comparing the specimen with one male specimen from the syntypes preserved in the Natural History Museum, London. He did not examine the female type specimen because no females were obtained from New Guinea Island. In 1975, he made several figures of female genital organ of *A. fissifrons* in order to compare them with those of *Argyrodes wolfi* Strand, 1911, but he did not examine the female type specimen at that time. In addition, his male and female specimens were collected from different localities, so they could belong to different species.

The feature of the male palp of Japanese specimens regarded as *A. fissifrons* exactly agrees with the figure made by Chrysanthus (1963). However the structure of female

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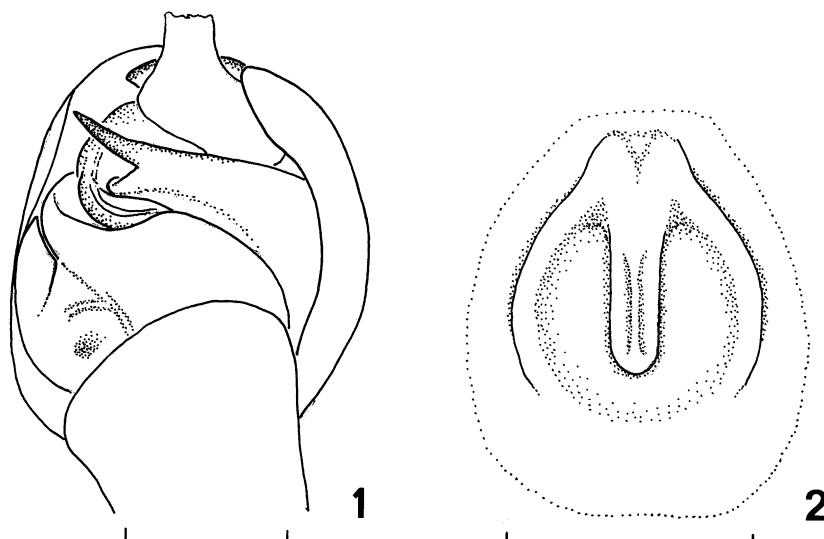
genital organ does not agree with the figure made by Chrysanthus (1975). Therefore it was necessary to examine the female type specimen to solve this problem. We examined the male and the female type specimens of *A. fissifrons* preserved in the Natural History Museum, London. As a result, we have clarified that neither the Japanese spider nor the Lennel spider was a real *A. fissifrons*.

Though the male of Japanese spider cannot be distinguished from the male type specimen of *A. fissifrons* even by the structure of genital organ, female epigynum of Japanese spider is quite different from that of the female type specimen. We could not find any female specimen of *A. fissifrons* among many specimens collected from various parts of Japan. As the Japanese spider cannot be identified with any other species of the genus *Argyrodes*, it will be described as a new species in this paper. We have also identified the Lennel spider (Chrysanthus 1975, figs. 156-159) as *A. wolfi*.

Furthermore, we suggest that *Argyrodes menlunensis* Zhu et Song, 1991 is a junior synonym of *A. fissifrons*, because epigynum of *A. menlunensis* described by Zhu & Song (1991) exactly agrees with that of the female type specimen of *A. fissifrons*.

All the type specimens designated in this paper are deposited in the collection of the Zoological Department of National Science Museum, Tokyo.

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Figs. 1-2. *Argyrodes fissifrons* O. Pickard-Cambridge, 1869. —— 1, Male left palp, ventral view (syntype, BM7861-2); 2, epigynum (syntype, BM7861-2). (Scales: 0.25 mm.)

Argyrodes fissifrons O. Pickard-Cambridge, 1869
 (Figs. 1-2)

Argyrodes fissifrons O. P.-Cambridge, 1869, p. 380, figs. 31-38 (syntypes from Ceylon, preserved in the Natural History Museum, London, examined); Chrysanthus, 1963, p. 737, figs. 55-58.

Argyrodes menlunensis Zhu et Song, 1991, p.139 (female holotype from Menglun, Yunnan, China, not examined); Zhu, 1998, p.220, fig. 144. **SYN. NOV.**

Specimens examined. Type series. Syntypes: 1 ♀ 1 ♂, Ceylon (=Sri Lanka) (BM 7861-2).

Other specimens examined. 1 ♂, Ceylon (=Sri Lanka) (BM 15.3.5.2.37.38). 1 ♀ 1 ♂, Wamena, Irian Jaya, Indonesia, 31-VII-3-VIII-1982, A. Tanikawa leg. 2 ♀ 1 ♂, Jayapura, Irian Jaya, Indonesia, 4-5-VIII-1982, A. Tanikawa leg.

Argyrodes kumadai sp. nov.
 (Figs. 3-8)

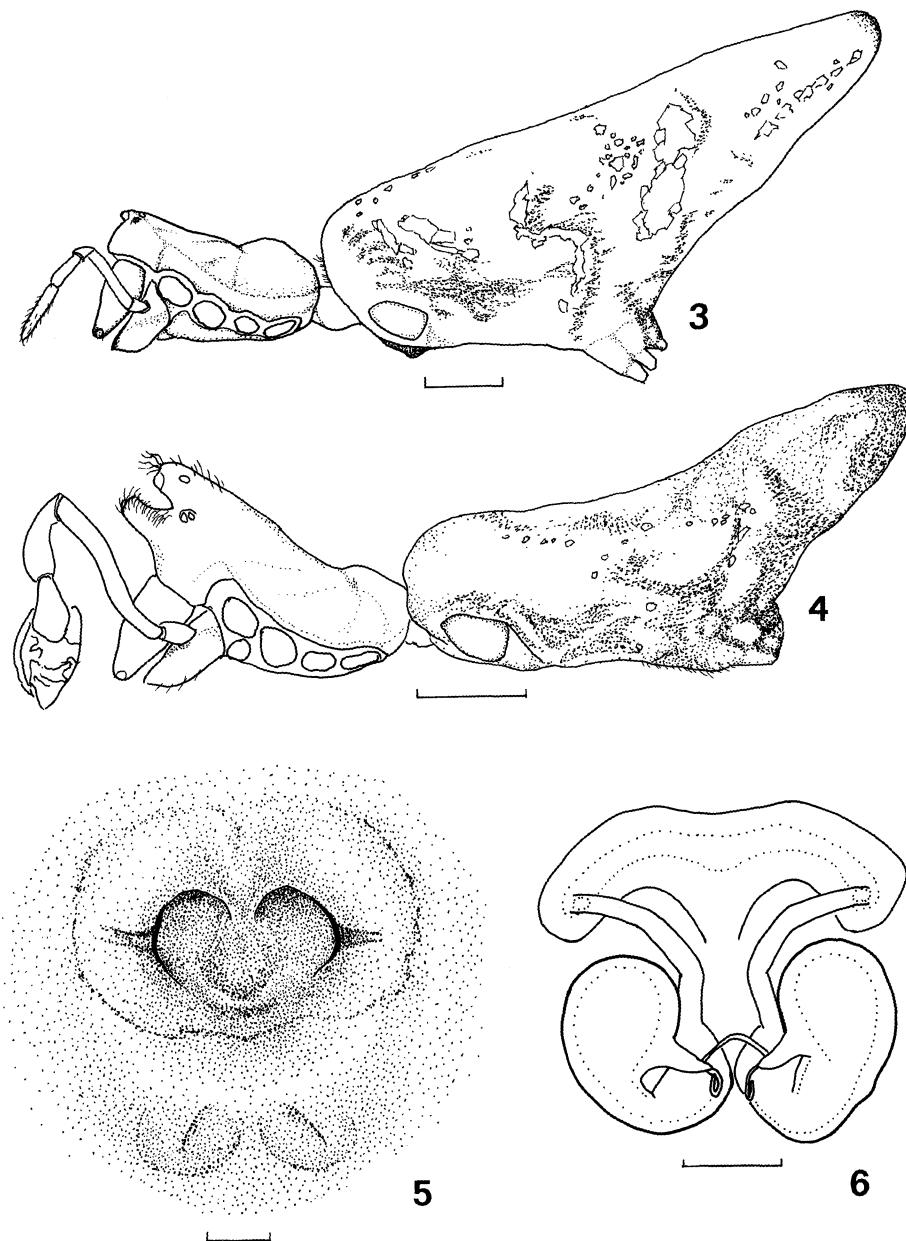
Argyrodes fissifrons: Bösenberg & Strand, 1906, p.130, figs.48, 235, 236, 240; Shinkai & Takano, 1984, p.52; Yaginuma, 1986, p.51, figs. 28-2; Chikuni, 1989, p.34, fig. 23; Zhu & Song, 1991, p.134, fig.5; Zhu, 1998, p.206, fig.134. [Nec *Argyrodes fissifrons* O. Pickard-Cambridge, 1869.]

Specimens examined. Type series. Holotype: ♀, Cape Hedo-misaki, Kunigamison, Okinawajima Island, Okinawa Prefecture, Japan, 18-VII-1987, A. Shinkai leg. (NSMT-Ar 4181).

Paratypes: 1 ♀, Kotokuji, Akiruno-shi, Tokyo, 16-X-1983, K. Kumada leg. (NSMT-Ar 4182). 1 ♂, Tateyama-shi, Chiba Prefecture., 30-VII-1977, S. Matsumoto leg. (NSMT-Ar 4183). 1 ♀, Tsukui Shiroyama, Tsukui-cho, Kanagawa Prefecture., 17- VII-1983, A. Tanikawa leg. (NSMT-Ar 4184). 1 ♂, Noba-cho, Yokohama-shi, Kanagawa Prefecture., 19-VII-1980, T. Ueno leg. (NSMT-Ar 4185). 1 ♂, Ichiyama, Tagata-gun, Shizuoka Prefecture. 31-VII-1982, K. Kumada leg. (NSMT-Ar 4186). 1 ♀, 20-VIII-1980 (NSMT-Ar 4187), 1 ♀, 11-VIII-1981 (NSMT-Ar 4188), Kokubicho, Suzuka-shi, Mie Prefecture. A. Uyemura leg. 1 ♂, Nan-gusuku, Nago-shi, Okinawajima Island, Okinawa Prefecture., 18-VII-1987, A. Shinkai leg. (NSMT-Ar 4189). 1 ♂, same data as for the holotype (NSMT-Ar 4190). 1 ♀, 17-VIII-1985 (NSMT-Ar 4191), 1 ♂, 24-VIII-1987 (NSMT-Ar 4192), Tsukigahama, Iriomotejima Island, Okinawa Prefecture, A. Tanikawa leg.

Other specimens examined: JAPAN. 67 ♀ 29 ♂ from Tokyo, Chiba, Kanagawa, Shizuoka, Gifu, Mie, Wakayama, Okayama, Oita, Miyazaki, Kagoshima, and Okinawa Prefectures. TAIWAN. 3 ♀ 3 ♂, Nanshanhsia, 28-XII-1994, T. Kimura leg.

Description (based on the female holotype and one of the male paratypes; variations among type series are given in the parentheses). Measurement (in mm). Total length ♀ 10.32 (4.32-10.80), ♂ 6.72 (3.44-7.44); carapace length ♀ 3.04 (1.76-2.64), ♂ 2.56 (1.60-2.80); width ♀ 1.84 (1.12-1.60), ♂ 1.52 (1.04-1.60); abdomen length ♀ 7.44 (2.64-7.52), ♂ 4.32 (1.68-4.64), width ♀ 2.88 (1.28-3.84), ♂ 1.52 (0.80-1.76); height ♀ 5.04 (1.52-5.20), ♂ 2.40 (0.88-2.40). Length of legs of the female holotype and one of the male paratypes from Okinawa Prefecture (NSMT-Ar 4181, 4189; Tarsus+Metatarsus+Patella and Tibia+Femur=Total): ♀ I, 3.20+8.08+8.16+8.32=27.76; II, 2.40+



Figs. 3-6. *Argyrodes kumadai* sp. nov. — 3, female, lateral view, legs omitted (holotype, NSMT-Ar 4181); 4, male, lateral view, legs omitted (paratype, NSMT-Ar 4189); 5, epigynum (holotype, NSMT-Ar 4181); 6, female genitalia (holotype, NSMT-Ar 4181). (Scales: 3-4, 1 mm; 5-6, 0.1 mm.)

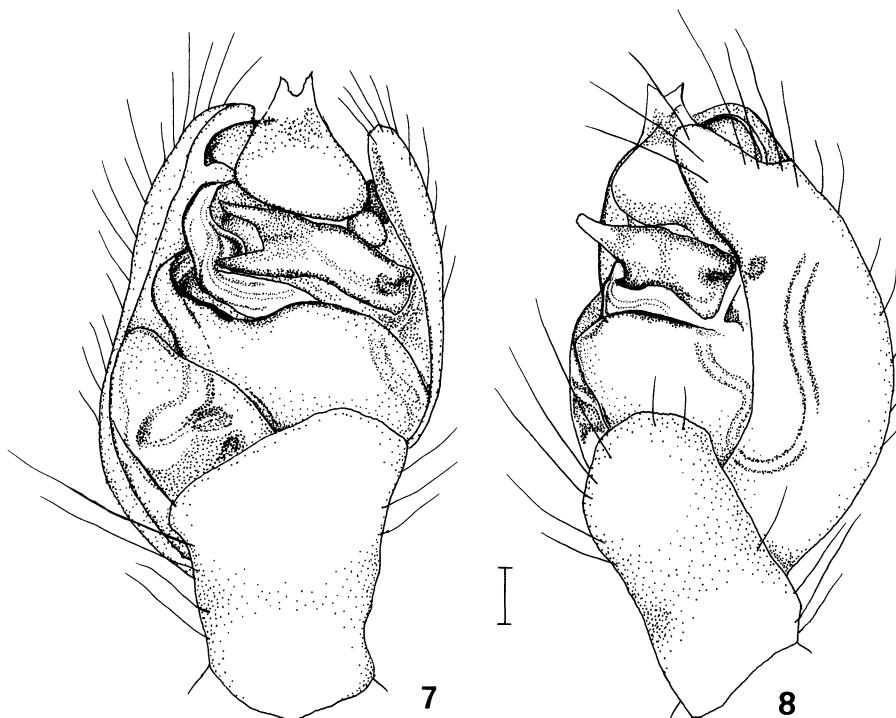


Fig. 7-8. *Argyrodes kumadai* sp. nov. —— 7, Male left palp, ventral view (paratype, NSMT-Ar 4189); 8, same, lateral view (paratype, NSMT-Ar 4189)

$4.88 + 5.04 + 5.60 = 17.92$; III, $1.52 + 2.64 + 2.56 + 3.36 = 10.08$; IV, $2.48 + 5.20 + 5.36 + 6.40 = 19.44$. ♂ I, $2.64 + 6.00 + 6.56 + 6.16 = 21.36$; II, $2.08 + 3.84 + 4.08 + 4.00 = 14.00$; III, $1.28 + 2.00 + 2.00 + 2.48 = 7.76$; IV, $2.00 + 3.52 + 3.92 + 4.32 = 13.76$.

Female and male: Carapace length/width ♀ 1.65 (1.57-1.69), ♂ 1.68 (1.54-1.83). Male palp as shown in Figs. 7-8. Abdomen elongated triangle in lateral view (Figs. 3-4), length/width ♀ 2.58 (1.82-2.58), ♂ 2.84 (2.10-2.84), height/length ♀ 0.68 (0.57-0.73), ♂ 0.56 (0.52-0.65). Female genitalia as shown in Figs. 5-6.

Coloration and markings in alcohol. Female and male: Carapace dark brown. Legs light brown with dark brown annulation. Abdomen brown with black markings and silver markings.

Range. Japan (except northern part), Taiwan, China.

Remarks. This species closely resembles *Argyrodes fissifrons*. Males of these two species can not be separated even by the palpal structure (Figs. 1, 7) as well as general appearance. These species can be distinguished by the feature of the female genital organ (Figs. 2, 5).

Etymology. Named after Mr. Ken-ichi Kumada, Mie.

摘要

チリイソウロウグモは Bösenberg & Strand (1906) によって *Argyrodes fissifrons* O. Pickard-Cambridge, 1880 と同定され、日本から記録された。しかし、基準標本との比較の結果、この同定は誤りであることが判明した。また、その他の既記載のイソウロウグモ類のいずれにも同定することができなかつたので、*Argyrodes kumadai* sp. nov. の学名のもとに新種として記載した。和名については従来通りチリイソウロウグモを使用したい。さらに、中国から記載された *Argyrodes menlunensis* Zhu et Song, 1991 は、原記載における外雌器の図から判断して *A. fissifrons* の新参シノニムとした。

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